



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,980	07/10/2003	Jin-Sheng Gong	BHT/3111-339	1256

7590 03/17/2008
BRUCE H. TROXELL
SUITE 1404
5205 LEESBURG PIKE
FALLS CHURCH, VA 22041

EXAMINER

ROSARIO, DENNIS

ART UNIT	PAPER NUMBER
----------	--------------

2624

MAIL DATE	DELIVERY MODE
-----------	---------------

03/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/615,980	Applicant(s) GONG ET AL.	
	Examiner Dennis Rosario	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 1,2,8,11,12-15 and 17-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group I, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/22/08.

Response to Amendment

2. The response to election was received on 2/22/08. Claims 22-28 are pending.

Response to Arguments

3. Applicant's arguments with respect to claims 1,2,8,11,12-15 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 22-24, 26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Dwin et al. (US Patent 5,517,612).

Regarding claim 22, Dwin discloses an apparatus for down scaling a plurality of input frames to output a plurality of output frames, comprising:

- a) a data buffer (fig. 1, num. 18 is a buffer corresponding to fig. 2B, numerals 27',27" and 28 that is a detailed view of fig. 1, num. 24), for buffering the input frames and outputting the output frames according to a decision signal (generated in fig. 1, num. 24 of which a detailed view is shown in fig. 4A that shows a SELECTOR 84 the output of which is the claimed decision signal); and
- b) a down-scaling control circuit (fig. 2A, num. 70 of which a detailed view is shown in figures 4A and 4B), coupled to the data buffer (fig. 2B, num. 27'), for generating the decision signal (output of fig. 4B, numerals 90 and 92) according to a scaling ratio parameter (in fig. 4A, numerals 76',76",76''' and 76'''' that include a "desired scaling ratio" in col. 6, line 63), the down-scaling control circuit (fig. 2A,num. 70) comprising:
 - b1) a selector (fig. 4A,num. 84,88 and fig. 4B,numerals 90 and 92) for selecting a plurality of first sampling positions (as shown by a plurality of dots and lines in fig. 3:INPUT) in a first input frame (the upper INPUT signal is the first frame),
 - b2) a plurality of first skipping positions (corresponding to fig. 3:STEP 1 that shows lines that were skipped relative to the upper INPUT signal of fig. 3) in the first input frame,
 - b3) a plurality of second sampling positions (the lower INPUT signal in fig. 3 that shows similar sampling positions as the upper INPUT signal) in a second input frame (the lower INPUT signal in fig. 3), and

- b4) a plurality of second skipping positions (corresponding to STEP 3 in fig. 3) in the second input frame according to the scaling ratio parameter (or “desired scaling ratio” in col. 6, line 63); and
 - b5) outputting a selection signal (via the output of fig. 4A, num. 84 and 88); and
 - b6) a control logic (fig. 4A, num. 86), for outputting the decision signal (output of fig. 4B, numerals 90 and 92) according to the selection signal (the output of fig. 4A, numerals 84 and 88);
- d) wherein at least one of the second sampling positions (said lower INPUT signal in fig. 3) in the second input frame is corresponding (since all of fig. 3 is used in a method as indicated by the STEPS 1-4 in fig. 3) to one of the first skipping positions (said upper INPUT signal of fig. 3) in the first input frame; and at least one of the first sampling positions in the first input frame is corresponding to one of the second skipping positions in the second input frame (since all of fig. 3 is used in a method as indicated by the STEPS 1-4 in fig. 3).

Claim 23 is rejected the same as claim 1. Thus, argument similar to that presented above for claim 1 in the context of fig. 3 is equally applicable to claim 23.

Regarding claim 24, Dwin discloses the apparatus of claim 22, wherein the down-scaling control circuit further comprises:

- a) an odd/even decision unit (fig. 4A, num. 78), for determining

whether the input frames (as shown in fig. 3 as two INPUT signals) is an odd frame (as indicated in fig. 4A as LOAD ODD SEED REG) or an even frame according to a vertical synchronization signal (or “vertical sync” in col. 6, line 24).

Regarding claim 26, Dwin discloses the apparatus of claim 22, wherein the selector selects the first sampling positions in the first input frame, the second sampling positions input frame according to a first offset value (“offset” in col. 1, line 57 and in col. 11, line 25) and second offset value respectively (where the offset is a relative value meaning a first offset of a 1st object’s perspective is offset relative to a second object and the second offset of a 2nd object’s perspective is offset relative to the 1st object).

Regarding claim 28, Dwin discloses the apparatus of claim 22, wherein the data buffer (fig. 1,num. 18) is a FIFO-type data buffer (fig. 2B, num. 52 which serves the same function of fig. 1, num. 18 of being a downstream buffer).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dwin et al. (US Patent 5,517,612) in view of Priem et al. (US Patent 4,908,780).

Regarding claim 25, Dwin does not teach that fig. 4A,num. 86 or mux is an AND gate 80.

Preim teaches a mux in fig. 6a,num. 84 with an AND gate upon the output of the mux.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Dwin's teaching of the mux 86 with Preim's mux 84 with AND gate 80, because Preim's teaching of fig. 6a is used for anti-aliasing of images.

8. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dwin et al. (US Patent 5,517,612) in view of Tokuyama et al. (US Patent 6,438,274 B1).

Regarding claim 27, Dwin does not disclose claim 27, but teaches using an offset as discussed in claim 26, above.

Tokuyama teaches an offset via fig. 5, num. 511 and claim 27 of:

a) wherein when the first offset value is 0 (where the 2X2 squares of fig. 9 have no offset while fig. 1 has an "OFFSET AMOUNT"), the second offset value is $M/N-1$ (or " $I_r=I_0/X$ " in col. 14, line 13), wherein M is the number of horizontal pixels of the input frame (represented by said X of I_r since X describes "...the number of pixels...is reduced...in the main scanning direction" in col. 13, lines 49-53), and N is the number of horizontal pixels of output frame (or said I_r which represents the number of reduced pixels in the main scanning direction after reduction.).

Note that no patentable weight is given to the structure of the claimed formula, namely the claimed "-1" portion of $M/N-1$ just the variables of the equation were given patentable weight. However, if the structure of $M/N-1$ were given patentable weight, the rejection of Tokuyama will be withdrawn since Tokuyama does not teach the "-1" portion.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Dwin's teaching of offset with Tokuyama's offset, because Tokuyama's offset "improve[s] the image quality" in col. 16, line 5.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dennis Rosario/
Examiner, Art Unit 2624

/Matthew C Bella/
Supervisory Patent Examiner, Art
Unit 2624